

CLAIMS

What is claimed and desired to be secured by letters patent is:

1. An optical device adapted to receive an optical fiber having a core through which optical signals propagate, the optical device comprising:

a housing having an opening for receiving a terminal end of the optical fiber; and

an optical component having a first facet and a second facet parallel to the first facet, the first facet of the optical component contacting the terminal end of the optical fiber so that the optical signals are incident upon the first facet, while the second facet of the optical component is disposed from the terminal end a distance that enables the optical signals which are internally reflected within the optical component to be substantially prevented from entering into the terminal end of the optical fiber.

2. The optical device as recited in claim 1, wherein the first facet is normal to the axis of the terminal end of the fiber.

3. The optical device as recited in claim 1, wherein the optical component is formed from a material selected from the group consisting of glass and plastic.

4. The optical device as recited in claim 1, wherein the housing further comprises a port adapted to receive an optoelectronic package.

5. The optical device as recited in claim 4, wherein the optoelectronic package comprises a package selected from the group consisting of a receiver optical sub-assembly and a transmitter optical sub-assembly.

6. The optical device as recited in claim 1, wherein the housing comprises a base and a ferrule.

7. The optical device as recited in claim 6, wherein the base comprises a protrusion that cooperates with the optical component to position the optical component within an opening of the ferrule.

8. The optical device as recited in claim 1, further comprising a mount at least partially connected to the optical component, the mount configured to position the optical component within at least a portion of a port formed in the housing.

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9. An optical device adapted to receive an optical fiber having a core through which optical signals propagate, the optical device comprising:

a housing comprising a ferrule having the optical fiber connected thereto and a base configured to receive the ferrule; and

a first optical component held within the base and positioned so as to abut the terminal end when the ferrule is received in the base, the first optical component having a diameter that is greater than a diameter of the core of the optical fiber.

10. The optical device as recited in claim 9, wherein the base further comprises a port configured to receive a second optical component therein.

11. The optical device as recited in claim 10, wherein the base further comprises a region, disposed between the first optical component and the second optical component, which has a refractive index lower than a refractive index of the first optical component.

12. The optical device as recited in claim 10, wherein the base further comprises an air gap disposed between the first optical component and the second optical component.

13. The optical device as recited in claim 10, wherein the second optical component is a transmitter sub-assembly.

14. The optical device as recited in claim 13, wherein the transmitter sub-assembly comprises a laser transmitter capable of generating electromagnetic radiation carrying the optical signals and a lens in optical communication with the laser transmitter, wherein said lens focus the electromagnetic radiation upon the terminal end of the optical fiber.

15. The optical device as recited in claim 9, wherein the optical component has an axis that is perpendicular to a facet formed at the terminal end of the optical fiber.

16. The optical device as recited in claim 9, wherein the optical component has a thickness of less than about 2 mm.

17. The optical device as recited in claim 9, wherein the optical component has a thickness of approximately 1 mm.

18. The optical device as recited in claim 9, further comprising a mount at least partially connected to the optical component, the mount configured to position the optical component within at least a portion of a port formed in the housing.

19. The optical device as recited in claim 18, wherein the mount comprises a lip disposed about a periphery of the mount and one or more member extending from the periphery of the mount.

20. An optical device adapted to receive an optical fiber having a core through which optical signals propagate, the optical device comprising:

a housing having an opening for receiving a terminal end of the optical fiber and a port adapted to receive an optoelectronic package; and

an optical component supported by the housing, the optical component having a first facet contacting the terminal end of the optical fiber so that the optical signals are incident upon the first facet and a second facet parallel to the first facet and disposed from the terminal end a distance that enables the optical signals which are internally reflected within the optical component to be substantially prevented from entering into the terminal end of the optical fiber.

21. The optical device as recited in claim 20, wherein the housing further comprises a base and a ferrule capable of connecting to the base.

22. The optical device as recited in claim 20, wherein an air gap is disposed between the optical component and the optoelectronic package.

23. The optical device as recited in claim 20, wherein the optoelectronic package is a TOSA.

24. The optical device as recited in claim 20, further comprising a mount at least partially connected to the optical component, the mount configured to position the optical component within at least a portion of the port.